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PREFACE

THIS Volume, No. 155 of the *Journal* of the Iron and Steel Institute, is the first of a new series. It contains the papers and all other material, with the exception of advertisements, published in the four parts issued monthly from January to April, 1947.

In the old series of the *Journal*, which was published in octavo size, two volumes were issued each year, but in this new series of quarto size it is proposed to issue three volumes each year.

The old series came to an end with vol. CLII, the second volume for 1945. Two volumes (CLIII and CLIV), of quarto size, cover 1946, a year of transition.

The present series will continue to make available the contents of the monthly *Journal*, publication of which began in January, 1947, in the form of bound volumes.

Further information about the *Journal* will be found on page 2.

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ABBREVIATIONS AND SYMBOLS

Å.	Ångstrom unit(s) = 1×10^{-10} m.	kX.	crystal Ångstrom(s) = 1000 Siegbahn X-units.
A.C.	air-cooled ; alternating current.	lb.	pound(s).
A.H.	air-hardened.	L.F.	low-frequency.
amp.	ampere(s).	M	molar (solution).
amp.hr.	ampere-hour(s).	m.	metre(s).
approx.	approximately.	m.amp.	milliampere(s).
at.-%	atomic per cent.	max.	maximum.
at.wt.	atomic weight.	mg.	milligramme(s).
atm.	atmosphere(s) (pressure).	min.	minimum ; minute(s).
A.W.G.	American wire-gauge.	ml.	millilitre(s).
Bé.	Baumé (scale).	mm.	millimetre(s).
b.h.p.	brake horse-power.	m.m.f.	magnetomotive force.
B. & S.	Brown and Sharpe (gauge).	m.p.	melting point.
B.o.T.	Board of Trade.	mV.	millivolt(s).
b.p.	boiling point.	mμ	millimicron = 1×10^{-9} m. = 10 Å .
B.T.U.	Board of Trade unit(s).	N	normal (solution).
B.Th.U.	British thermal unit(s).	N.T.P.	normal temperature and pressure.
B.W.G.	Birmingham wire-gauge.	O.H.	open-hearth ; oil-hardened.
C.	centigrade (scale).	O.Q.	oil-quenched.
cal.	calory (-ies).	oz.	ounce(s).
c.c.	cubic centimetre(s).	p.d.	potential difference.
c.d.	current density.	pH	hydrogen-ion concentration.
c.g.s.	centimetre-gramme-second unit(s).	p.p.m.	parts per million.
cm.	centimetre(s).	r.p.m.	revolutions per minute.
coeff.	coefficient(s).	sec.	second(s).
conc.	concentrated.	sp.gr.	specific gravity.
const.	constant(s).	sq.	square.
cu.	cubic.	S.W.G.	standard wire-gauge.
cwt.	hundredweight(s).	T.	tempered.
D.C.	direct current.	temp.	temperature.
dia.	diameter.	V.	volt(s).
dil.	dilute.	VA.	volt-ampere(s).
dm.	decimetre(s).	W.	watt(s).
e.m.f.	electromotive force.	Wh.	watt-hour(s).
e.v.	electron volt(s).	W.G.	water-gauge.
F.	Fahrenheit (scale).	W.Q.	water-quenched.
ft.	foot, feet.	wt.	weight.
ft.lb.	foot-pound(s).	wt.-%	weight per cent.
g.	gramme(s).	yd.	yard(s).
gal.	gallon(s).	μ	micron(s) = 1×10^{-6} m.
H.F.	high-frequency.	μg.	microgramme(s) = 1×10^{-6} g.
h.p.	horse-power.	μμ	1 millionth micron = 1×10^{-12} m. = 0.01 Å .
h.p.hr.	horse-power-hour(s).	Ω	ohm(s).
hr.	hour(s).	°	degree (arc or temperature).
in.	inch(es).	'	minute of arc ; foot (feet).
in.lb.	inch-pound(s).	"	second of arc ; inch(es).
I.S.W.G.	Imperial standard wire-gauge.	<	less than.
K.	absolute temperature (Kelvin scale).	>	greater than.
kg.	kilogramme(s).	≠	not less than.
kg.cal.	kilogramme-calory(-ies).	≠	not greater than.
kg.m.	kilogramme-metre(s).	≤	equal to or less than.
km.	kilometre(s).	≥	equal to or greater than.
kV.	kilovolt(s).	≡	not equal to.
kVA.	kilovolt-ampere(s).	≡	identically equal to.
kW.	kilowatt(s).	≈	approximately equal to.
kWh.	kilowatt-hour(s).	∝	proportional to.